OF THE BIG CANALS

How They Have Grown in the United States.

THE ADVANTAGES OBTAINED

By Means of These Waterways—Clinton's "Ditch"—Canadian Progress. Outlook for a Second Century.

ONE hundred years ago this summer two canals were built in Massachusetts. Their aggregate length was but five miles, and they were constructed for the purpose of avoiding the rapids at South Hadley and the Montague falls on the Connecticut river. They are no longer in use, but they will always be remembered as the beginning of the now magnificent system of artificial waterways for which the United States have become famous.

About the time that these short canals were completed the agitation began which was to end a quarter of a century later with the inauguration of a plan for connecting the ocean with the great lakes by means of what scoffers of that day called "De Witt Clinton's ditch." Begun in 1817 and opened in 1825, the Erie canal has ever since been an important factor in the politics and prosperity of New York state. Its original cost was nearly $8,000,000, and many times that sum have been expended in its improvement and maintenance. It spans the state of New York with a ribbon of water 363 miles long, and is practically the first on the list of similar great enterprises projected and carried out by other commonwealths of the republic.

For this reason, and also because just a century ago a bill was introduced in the New York legislature providing plans for a canal system, the grain dealers, warehousemen and shippers of the Empire State are arranging to commemorate the anniversary by a celebration suitable to the occasion. It is indeed a centennial that ought to be accentuated by imposing ceremonies, for in the hundred years of progress canals have played an important part and have swollen from the five miles of 1792 to the 4,000 miles of 1892.

And yet, if the schemes now under consideration are carried out, the second century of canal building in the United States will overshadow the first century as a giant does a pygmy. The most immediate progress is to be made under the provisions of this year's river and harbor bill, regarding which a writer in The Review of Reviews says that it provides a sufficient sum to begin the work of deepening the connecting channels of the great lakes so that there will nowhere be less than twenty feet of water between Chicago, Duluth and Buffalo. The official estimates call for nearly $7,500,000, which sum is exclusive of the work on the St. Mary's Falls canal, which was provided for in the river and harbor bill of 1890.

Eleven hundred less vessels passed through the Suez canal in 1890 than passed through the canal into Duluth during the subsequent year, and there went through the "Soo" canal at the outlet of Lake Superior more than three times as many vessels and nearly 1,750,000 tons more freight during 1890 than through the Suez canal for the same period. Speaking of the future, the writer already referred to says:

"Interest in waterway improvements has had a wonderful growth in the United States within the last year or two, as is evidenced by the strong support of the daring project of a ship canal twenty-one feet deep through American territory from the great lakes to the sea. Congress has been asked to provide for surveys, examinations and estimates of cost of all the practicable routes for such a canal, with a view to determining the one that is most advantageous. The advocates of this project point out that in addition to the immense commercial value which it would have, it will become a military necessity a few years hence when the enlargement of the St. Lawrence canals to a uniform depth of fourteen feet is completed. For then a way will be open into the great lakes for the war vessels of the British navy, while there will be none

GOVERNOR DE WITT CLINTON.

available for those of the United States. There is not the slightest reason to doubt that Chicago and Duluth will, within the lifetime of people now mature, receive in their harbors ocean going vessels from every port on the seas.

"Ultimately a ship canal will connect the Mississippi with the great lakes and Chicago will have water communication via the great river and the Nicaragua canal with our Pacific coast and with the west coast of South America. The Erie canal must of course be developed into a ship canal, with a clear twenty or twenty-one feet of water; and Chicago's great gain would be New York's gain also. The Hennepin canal to connect Chicago with the Mississippi is already a certainty. The early development and completion of this great line of natural and artificial waterways from New Orleans to Minneapolis, from Davenport to Chicago, from Duluth to Buffalo and from Buffalo via the Erie canal and the Hudson river to New York city would be the most brilliant and productive investment our government could make, and there would follow a revival of American shipbuilding for the coastwise and internal as well as for the foreign trade."

However, there is another side to the shield, and if the views of Captain W. C. Clark are correct, the advocates of canals have some "tall hustling" to do. The captain is a mogul among the New York canal men and is one of the promoters of the coming centennial celebration. "There is a crisis," he remarked the other day to a New York Sun reporter, "and it has got to be met at once. More grain has come from the west to the seaboard since the opening of lake navigation to the present time than ever before in a similar period. Philadelphia is receiving an unprecedented boom in grain export shipments. It is providing cheaper terminal facilities than those of the metropolis. The trunk line pool gives Philadelphia through the new feeder—the Reading road—a rate of three cents per 100 pounds lower than the New York rates.

"With this condition there can be only one result. Millions of bushels of grain that should come to New York are directed to rival seaports. Since the opening of lake navigation grain has been forwarded from Chicago to Buffalo, a distance of nearly 1,000 miles, for one cent and a fraction per bushel. The rate on the canal from Buffalo to New York has fluctuated between two and one-eighth and four cents per bushel, and this, mind you, on a waterway that has been without improvements since war times. An important question naturally arises, Is New York to allow her great canal system to deteriorate to such an extent as to make it impossible for boatmen to successfully compete with rival routes and the great Canadian canal system?

"Millions upon millions have been expended in bettering and perfecting the railway routes. Hundreds of boats are vainly waiting for cargoes at the port of Buffalo. Figures tell the story of the need of canal improvements better than words. In 1862 over 88,000,000 bushels of grain came to Buffalo from the far

WILLIAM HAMILTON MERRITT.

west and all but 8,000,000 bushels was shipped to New York via the Erie canal. In 1880 the canal carried only 71,000,000 of the 105,000,000 bushels of grain received at Buffalo. Last year the grain shipments from Buffalo by canal were a little more than 34,000,000 out of 129,000,000 received at that port.

"Note the falling off. It is astounding. Private corporations are getting the upper hand of the state. One result is inevitable. The canals must be maintained properly or with constantly diminishing traffic the time will come when they will have to be abandoned."

Captain Clark's reference to the "great Canadian canal system" is worthy of note, for the system is in fact a great one. It owes much to the efforts of William Hamilton Merritt, who can justly be termed the De Witt Clinton of the Dominion. It was in 1823 that Merritt and his associates subscribed the money to begin the work on that magnificent triumph of engineering now known as the Welland canal, which overcomes the obstacle of Niagara falls and connects the great lakes of Erie and Ontario.

In connection with the coming celebration many things of practical importance will be discussed, chief among them the questions of speed and carrying capacity. It would appear that the days of mule power and towpaths are passing away, and in their place the feasibility of steam, electricity and traction cables is being considered. The widening and deepening of these artificial waterways naturally call for bigger boats, heavier cargoes and greater powers of propulsion. What the decision may be one can hardly anticipate, but it is safe to predict, as before remarked, that the second century of canal enterprise in the United States will dwarf the progress of its first hundred years. FRED C. DAYTON.

New York on a Hot Day.

To a philosopher inured to extreme degrees of heat the streets of New York on a hot day would afford an interesting study. He would see men and women boiled in the streets, broiled in the avenues, grilled in the surface cars, roasted in the tenement houses, baked in the squares, bleached in the baseball parks and melted in the business offices. The heat fairly dances on the sidewalk so that it resembles a mirage on a lowland. The heat pours down from above, rises from below and on all sides. The ambulances are kept on a keen gallop.

Privileged Peeresses.

It means something for a woman to be a peeress of the United Kingdom of Great Britain and Ireland, for there any one of these favored beings, whose title has been acquired by birth, marriage or creation, is free from arrest or imprisonment on civil process, and in the event of a peeress being charged with a criminal offense she would be tried by the house of lords.

Unanimous Approval.

Weeping Widow—You are sure, Mr. Boneplaster, you will conduct everything in a satisfactory manner?

Eminent Undertaker—Have no fear on that score, I beg of you, Mrs. Billhope. Of all the people I have buried in my long and successful career, I am proud to say that not one ever raised the slightest objection to my work.—London Tit-Bits.

No Protests.

Burglar (flashing his dark lantern in the face of the sleeper)—If you make a noise you're a dead man! I want your money and I want it quick! Where is it?

Mr. Billus (only half awake)—Why, great Scott, Maria! What have you done with the twenty-five dollars I gave you yesterday?—Chicago Tribune.